

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/016610

A. CLASSIFICATION OF SUBJECT MATTER Int.Cl⁷ C22C37/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ C22C37/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2005
Kokai Jitsuyo Shinan Koho 1971-2005 Toroku Jitsuyo Shinan Koho 1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	JP 55-134153 A (Kanto Tokushu Seiko Kabushiki Kaisha), 18 October, 1980 (18.10.80), (Family: none)	1-16 17-25
X A	JP 58-104154 A (Goetze AG.), 21 June, 1983 (21.06.83), Claims & US 4435226 A & EP 80590 A2 & DE 3147461 A	1-16 17-25

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
07 February, 2005 (07.02.05)

Date of mailing of the international search report
08 March, 2005 (08.03.05)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

WO2005085488

Title:

HEAT RESISTING CAST IRON AND EXHAUST SYSTEM PART THEREFROM

Abstract:

A heat resisting cast iron containing graphite for use in exhaust system parts used at temperatures exceeding 800 DEG C, which heat resisting cast iron comprises, on weight basis, 3.5 to 5.6% of Si and 1.2 to 15% of W, having an interlayer with W and Si concentrated therein on boundaries of graphite and the base structure. Exhaust system parts comprised of this heat resisting cast iron have an AC1 transformation point, as measured while raising temperature from 30 DEG C at a rate of 3 DEG C/min, of 840 DEG C or higher and exhibit a thermal crack life of 780 cycles or more at a thermal fatigue test in which heating and cooling are performed under such conditions that the upper limit temperature is 840 DEG C, the temperature amplitude 690 DEG C and the constraint ratio 0.25.